

(19)



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11) Publication number:

**0 679 716 A1**

(12)

**EUROPEAN PATENT APPLICATION**  
published in accordance with Art.  
**158(3) EPC**

(21) Application number: **95900295.7**(51) Int. Cl.<sup>6</sup>: **C12N 15/11, C12Q 1/68,**  
**//G01N33/566**(22) Date of filing: **11.11.94**(86) International application number:  
**PCT/JP94/01916**(87) International publication number:  
**WO 95/14772 (01.06.95 95/23)**(30) Priority: **12.11.93 JP 355504/93**(43) Date of publication of application:  
**02.11.95 Bulletin 95/44**(84) Designated Contracting States:  
**AT BE CH DE DK ES FR GB GR IE IT LI LU MC**  
**NL PT SE**(71) Applicant: **Matsubara, Kenichi**  
**Room 804, 18-1, Yamadahi-gashi 3-chome**  
**Suita-shi,**  
**Osaka 565 (JP)**  
Applicant: **Okubo, Kousaku**  
**11-26, Segawa 2-chome**  
**Minoo-shi,**  
**Osaka 562 (JP)**(72) Inventor: **Matsubara, Kenichi**  
**Room 804, 18-1, Yamadahi-gashi 3-chome**  
**Suita-shi,**  
**Osaka 565 (JP)**  
Inventor: **Okubo, Kousaku**  
**11-26, Segawa 2-chome**  
**Minoo-shi,**  
**Osaka 562 (JP)**(74) Representative: **Vossius, Tilman et al**  
**Dr. Volker Vossius,**  
**Patent- und Rechtsanwaltskanzlei,**  
**Holbeinstrasse 5**  
**D-81679 München (DE)**(54) **GENE SIGNATURE.**

(57) A 3'-directed cDNA library which accurately reflects the abundance ration of mRNA in a cell has been prepared from various human tissues, and sequencing of the cDNAs contained in the library has be conducted to examine the incidence of each cDNA in each tissue. As each cDNA has expression information with each tissue corresponding to the mRNA concentration, these cDNAs are usable as a probe or primer for detecting cell anomoly or discriminating cells. The cloned gene can produce porteins utilizable as a medicine or the like.

**EP 0 679 716 A1**

SEQ ID NO:1837

SEQUENCE LENGTH:269

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS02087

SEQUENCE DESCRIPTION:

GATCCGAAGA GGAACCTCTG GTCATCTTTA ACAAGAAAAT CAGCAAGAAC CCTACCTTTA 60  
 AGTTATTTAA GGACAAAGTC AAGCTTGTGA AATGAACATT TGTGTATTTA AAANTTGAAT 120  
 CCATTCTGCT GACTTCTTAC TTTCACCTGCT GTTTATAAAA TGTGTAATGA ATTCTAACAA 180  
 CTCAAATTTT GCTTTTGTGAC GCNGTATTTT TANGTTANGN AAATATATTT NTGGTATAAC 240  
 TTTTATGCGA NAAATAAAAT ATATTCTGN 269

SEQ ID NO:1838

SEQUENCE LENGTH:268

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS02088

SEQUENCE DESCRIPTION:

GATCTCATTG TTTATTAACC TGTATTCTGT TTACATGTCT TTAACACAGT GGTTCTTAAA 60  
 TTGTAAGCTC AGGTTCAAAG TGTGGTAAT GCCTGATTCA CAACTTTGAG AAGGTAGCAC 120  
 TGGAGAGAAT TGGAATGGGT GCGGTAATT GGTGATACTT CTTTGAATGT AGATTTCCTA 180  
 TCACATCTTT AGTGTCTGAA TATATCCAAA TGTTTTAGGA TGTATGTTAC TTCTTAGAGA 240  
 GAAATAAAGC ATTTTTGGGA AGAATAAA 268

SEQ ID NO:1839

SEQUENCE LENGTH:265

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS02089

SEQUENCE DESCRIPTION:

GATCTATCTA AATATATTAA GTAAAATTAC ACCATTCACT TGTGGGAAA ATAATCTTTG 60  
 GTTTGGAAGA TATTAACATA ATGGGCATCT TAGAATCATA AATCACATGA AATGAGAGAC 120  
 AATGCAATAT TGTATAATTC CTGGATGATG CAATTGTTTT AATTGANNTT TCAAGTGCCA 180  
 TTATAAAGTT TTAATAATTA TCAATATGAG TTGGTGCCTA ATTTTNNNTT TCCTAAAAAT 240  
 AAAATTTTTC CTTTTATGA GTAAA 265

SEQ ID NO:1840

SEQUENCE LENGTH:261

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS02090

SEQUENCE DESCRIPTION:

GATCATAAAA CCTTCATTCC ATAGGTACCC TTTATCCTCA CAGATACAGA GACACCAAGA 60  
 AGAATCTGGA CAAATAGGAC TTGCTAAGTT CTCCACAGTT TATTACCATT AGATTATGTC 120

SEQ ID NO:7844  
 SEQUENCE LENGTH:37  
 SEQUENCE TYPE:nucleic acid  
 STRANDEDNESS:single  
 TOPOLOGY:linear  
 SEQUENCE DESCRIPTION:  
 CTCGCTCGCC CATCCTTATA CAGGCTCAGT TTTGTCT 37

SEQ ID NO:7845  
 SEQUENCE LENGTH:37  
 SEQUENCE TYPE:nucleic acid  
 STRANDEDNESS:single  
 TOPOLOGY:linear  
 SEQUENCE DESCRIPTION:  
 CTCGCTCGCC CATGTATAGG GACAGCATTT CTGAGAG 37

SEQ ID NO:7846  
 SEQUENCE LENGTH:38  
 SEQUENCE TYPE:nucleic acid  
 STRANDEDNESS:single  
 TOPOLOGY:linear  
 SEQUENCE DESCRIPTION:  
 CTGGTTCGGC CCACCTCTGA AGGTTCCAGA ATCGATAG 38

SEQ ID NO:7847  
 SEQUENCE LENGTH:22  
 SEQUENCE TYPE:nucleic acid  
 STRANDEDNESS:single  
 TOPOLOGY:linear  
 SEQUENCE DESCRIPTION:  
 CCAGGGTTTT CCCAGTCACG AC 22

SEQ ID NO:7848  
 SEQUENCE LENGTH:22  
 SEQUENCE TYPE:nucleic acid  
 STRANDEDNESS:single  
 TOPOLOGY:linear  
 SEQUENCE DESCRIPTION:  
 TCACACAGGA AACAGCTATG AC 22

# Claims

1. A purified single-stranded DNA, a purified single-stranded DNA complementary thereto, or a purified double-stranded DNA consisting of said single strands, containing all or a portion of a single-stranded DNA or a single-stranded DNA complementary thereto comprising any of the base sequences listed under SEQ ID NO 1-7837 and hybridizing specifically to a particular site of human genomic DNA, human cDNA or human mRNA.

2. A DNA probe consisting of a purified single-stranded DNA , a purified single-stranded DNA complementary thereto, or a purified double-stranded DNA consisting of said single strands, containing all or a portion of a single-stranded DNA or a single-stranded DNA complementary thereto comprising any of the base sequences listed under SEQ ID NO 1-7837 and hybridizing specifically to a particular site of human genomic DNA, human cDNA or human mRNA.
3. A DNA primer consisting of a purified single-stranded DNA, a purified single-stranded DNA complementary thereto, or a purified double-stranded DNA consisting of said single strands, containing all or a portion of a single-stranded DNA or a single-stranded DNA complementary thereto comprising any of the base sequences listed under SEQ ID NO 1-7837 and hybridizing specifically to a particular site of human genomic DNA, human cDNA or human mRNA.
4. A purified single-stranded DNA, a purified single-stranded DNA complementary thereto, or a purified double-stranded DNA consisting of said single strands, containing all or a portion of a single-stranded DNA or a single-stranded DNA complementary thereto, wherein said single-stranded DNA is complementary to a human mRNA containing any of the base sequences listed under SEQ ID NO 1-7837 (wherein T is read as U) or any portion thereof at its 3' region, and hybridizing specifically to a particular site of human genomic DNA, human cDNA or human mRNA.
5. A DNA probe consisting of a purified single-stranded DNA, a purified single-stranded DNA complementary thereto, or a purified double-stranded DNA consisting of said single strands, containing all or a portion of a single-stranded DNA or a single-stranded DNA complementary thereto, wherein said single-stranded DNA is complementary to a human mRNA containing any of the base sequences listed under SEQ ID NO 1-7837 (wherein T is read as U) or any portion thereof at its 3' region, and hybridizing specifically to a particular site of human genomic DNA, human cDNA or human mRNA.
6. A DNA primer consisting of a purified single-stranded DNA, a purified single-stranded DNA complementary thereto, or a purified double-stranded DNA consisting of said single strands, containing all or a portion of a single-stranded DNA or a single-stranded DNA complementary thereto, wherein said single-stranded DNA is complementary to a human mRNA containing any of the base sequences listed under SEQ ID NO 1-7837 (wherein T is read as U) or any portion thereof at its 3' region, and hybridizing specifically to a particular site of human genomic DNA, human cDNA or human mRNA.